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**Preliminary
Report of Findings
Hurricane Harvey Damage**

**Cole & Ashcroft, LP
5631 Brystone Drive
Houston, Texas 77041**

Submitted To

**Mr. Derek Fadner
McClenny, Moseley & Associates, PLLC
516 Heights Boulevard
Houston, Texas 77007**



***Project No.: 11992
Date: November 8, 2019
Texas Engineering Firm No. F-11857***


***Peter de la Mora, P.E.
Principal***

INTRODUCTION

McClenny, Moseley & Associates, PLLC, law firm, retained PE Service Engineers, LP to assess damage sustained by the Cole & Ashcroft, LP office and warehouse building, located at 5631 Brystone Drive, Houston, from heavy wind and rain during Hurricane Harvey. Our investigation was conducted by Mr. Peter de la Mora, P.E. The site assessment was performed on November 1, 2019. Mr. Jeff Holsomback, of Best Bet Roofing assisted with the roof observations.



**Cole & Ashcroft, LP
Office and Warehouse Building
5631 Brystone Drive, Houston, Texas**

For this report, the front of the Cole & Ashcroft, LP office and warehouse building faces in an easterly direction. Right and left directions refer to an observer facing the front of the building from Brystone Drive.

We were provided the following documents:

- Repair Estimate from National Public Adjusting; Date Entered: July 26, 2019, with attached photographs.

This report is based on information available to us at this time. Our investigation continues, and additional information or additional deficiencies in this building may be detected. We will make every effort to report any additional information, opinion or conclusion as promptly as possible. We reserve the right to revise our opinions and conclusions, if necessary and warranted by the discovery of new or additional information.

It is not the intent of this report to document all damage or deficiencies in and around this building but to show typical conditions that affect the opinions expressed in this report. The lists and photographs in or attached to this report are intended to illustrate representative damage and should not be considered being all inclusive of the damage observed in this building.

FINDINGS

Our investigation of the, Cole & Ashcroft, LP office and warehouse building located at 5631 Brystone Drive, Houston, Texas for damage from Hurricane Harvey wind revealed the following:

- The buildings are constructed on a common slab-on-grade type foundation with grade beams and individual footings to support column loads.
- The building structure is one-story, steel frame building.
- The roof is trapezoidal metal panels roof.

TABLE-1 below lists damage to the building observed during our site assessment of November 1, 2019, and other significant observations.

COLE & ASHCROFT, LP 5631 BRYSTONE DRIVE, HOUSTON, TEXAS		
TABLE 1	OBSERVED DAMAGE AND OTHER SIGNIFICANT OBSERVATIONS	
LOCATION	DAMAGE DESCRIPTION	PHOTOGRAPH NUMBER
EXTERIOR		
Front	• Overall view with left side	1
	• Address street number	2
Left Side	• Overall view at Office	3
ROOF		
Office Roof	• Left side edge; screws covered with sealant	4
	• Left slope; standing seam metal panel	5
	• Left slope; dirt and debris at gutter end	6

COLE & ASHCROFT, LP 5631 BRYSTONE DRIVE, HOUSTON, TEXAS		
TABLE 1	OBSERVED DAMAGE AND OTHER SIGNIFICANT OBSERVATIONS	
LOCATION	DAMAGE DESCRIPTION	PHOTOGRAPH NUMBER
Office Roof (continuation)	• Right corner at rear building	7
	• Taped seam near rear building wall	8
	• Middle and right slope at overlap seam; R-panel type metal Office roofing panels	9
	• Right slope; overall view	10
	• Crimps on Office roof; foot traffic	11
	• Crimps on Office roof; foot traffic	12
	• Crimps on Office roof; foot traffic	13
	• Crimps on Office roof; foot traffic	14
	• Crimps on Office roof; foot traffic	15
	• Sealant applied to Office roof screws	16
	• Sealant applied to vent jack	17
	• Deformed and sealant applied to flashing at rear building wall	18
	• Sealant applied to flashing at rear building wall	19
	• Wind separated Office roof joint	20
	• Wind separated Office roof joint	21
	• Sealant applied to roof vent jack	22
	• Sealant applied to flashing at rear building wall	23
	• Sealant applied to transition of panel types on left slope	24
	• Blown-off seam gasket	25
	• Wind displaced closure strip	26
	• Remaining closure strips	27
Warehouse Roof	• Overall view of trapezoidal seam metal roof (R-panel); • Screws have been covered with sealant	28

COLE & ASHCROFT, LP 5631 BRYSTONE DRIVE, HOUSTON, TEXAS		
TABLE 1	OBSERVED DAMAGE AND OTHER SIGNIFICANT OBSERVATIONS	
LOCATION	DAMAGE DESCRIPTION	PHOTOGRAPH NUMBER
Warehouse Roof	<ul style="list-style-type: none"> • Overall view of trapezoidal seam metal roof (R-panel); • Screws have been covered with sealant 	29
	• Sealant applied to screws	30
	• Sealant on panel standing seam	31
	• Sealant applied to screws	32
	• Sealant applied at edge trim and section strap	33
	• Edge of roof on left side	34
	• Roof crimps	35
	• Roof crimps	36
	• Roof crimps	37
	• Mechanical dent on roof panel	38
	• Wind lifted side joint	39
	• Translucent panel	40
	• Hail dent on panel	41
	• Hail dent on panel	42
	• Hail dent on panel	43
	• Hail dent on panel	44
	• Hail dent on panel	45
	• Hail dent on panel	46
	• Hail dent on panel	47
	• Hail dent on panel	48
	• Missing screws at rear right corner	49
	• Screw with dented metal	50
	• Taped joint at ridge vent	51
	• Taped joint at ridge vent	52
	• Hail dent on roof panel	53
	• Hail dent on roof panel	54
	• Hail dent on roof panel	55

COLE & ASHCROFT, LP 5631 BRYSTONE DRIVE, HOUSTON, TEXAS		
TABLE 1	OBSERVED DAMAGE AND OTHER SIGNIFICANT OBSERVATIONS	
LOCATION	DAMAGE DESCRIPTION	PHOTOGRAPH NUMBER
Warehouse Roof	• Hail dent on roof panel	56
	• Wind separated overlap joint	57
	• Wind separated overlap joint	58
	• Wind separated overlap joint	59
	• Wind separated overlap joint	60
	• Wind separated overlap joint	61
	• Wind separated overlap joint	62
	• Wind separated overlap joint	63
	• Wind separated overlap joint	64
	• Wind separated overlap joint	65
	• Wind separated overlap joint	66
	• Wind separated overlap joint	67
	• Wind separated overlap joint	68
	• Wind separated overlap joint	69
	• Wind separated overlap joint	70
	• Wind separated overlap joint	71
	• Wind separated overlap joint	72
	• Wind separated overlap joint	73
	• Wind separated overlap joint	74
	• Wind separated overlap joint	75
	• Wind separated overlap joint	76
	• Wind separated overlap joint	77
	• Wind separated overlap joint	78
	• Wind separated overlap joint	79
	• Hail dent on roof panel	80
	• Hail dent on roof panel	81
	• Hail dent on roof panel	82
	• Hail dent on roof panel	83
	• Left slope; 139 hail dents	84
	• Right slope; 143 hail dents	85

Weather Data

Review of Hurricane Harvey wind reports from Weather Underground shows the higher wind in the area of the Cole & Ashcroft, LP building was 47 mph gusts with sustained winds of 25 mph. In our opinion, the reported wind magnitude is capable of causing the damage observed at the Cole & Ashcroft, LP building. In addition, there were several tornadoes in the area of the Cole & Ashcroft, LP building. The diagram below shows the location of the Cole & Ashcroft building and the reported tornados on August 26, 2017 in the area.

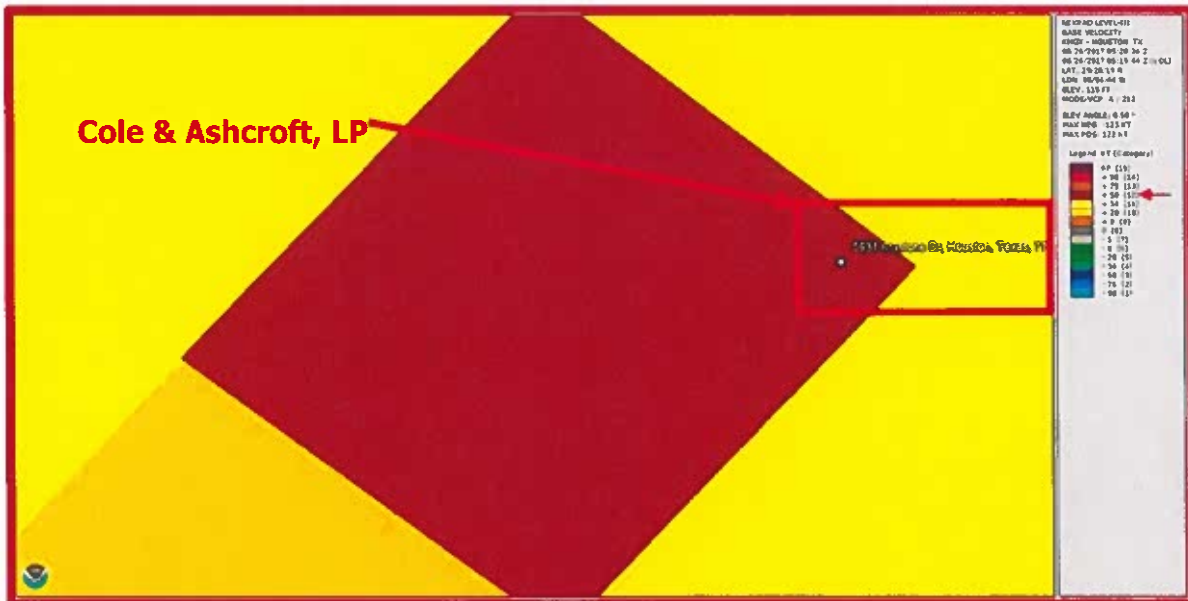
Weather Underground August 26, 2017



Plot of Location of Tornadoes August 26, 2017 near the Cole & Ashcroft, LP building.



NOAA's NCEI NEXRAD radar image with the Cole & Ashcroft, LP building within the 50 KTS wind zone on August 26, 2017 at 00:19:44 CDT



Additional weather information is included in **Attachment B**.

OPINION AND RECOMMENDATIONS

Based upon observations of the roof of the building; our review of weather data, and our own education, training and experience; we are ready to render the following opinions and recommendations at this time regarding the storm damage to the Cole & Ashcroft, LP office and warehouse building located at 5631 Brystone Drive, Houston, Texas. Table-1 in the preceding section lists our observations during our site examination on November 1, 2019.

On the office roof, we observed sealant was applied to all screws. Rubber gaskets pulled off head-wall flashing at taller building wall. There were hail dents and crimps on some roofing panels. Panels were separated at the longitudinal overlap panel joints. Screws were partially separated at overlap panel joints. The following photographs show samples of roof damage.



Photograph 20



Photograph 26



Photograph 17



Photograph 18

On the warehouse roof sealant had been applied to the screws. We observed wind bent gutter support brackets, crimped panel seams and hail dents on the roof panels. Panels were separated at the longitudinal overlap panel joints. Screws were partially separated at side joints. There were dents on the metal panel at screws indicating wind lift at on the roof panels. We also observed wind lifted side joints.



Photograph 39



Photograph 61



Photograph 65



Photograph 68

In our opinion, wind during Hurricane Harvey had sufficient force to cause the observed damage at the Cole & Ashcroft, LP building. As a result of wind damage during Hurricane Harvey, the metal roofs of the office and warehouse, and gutters of the Cole & Ashford, LP building, require removal and replacement.

In the interior of the building, there is water damage from roof leaks as follows:

Office

Lobby – Water damage ceiling tiles and walls;

Cubicle Room Reception – Water damaged ceiling tiles and walls;

Office 4 – Water damaged ceiling tiles and walls;

Office 5 – Water damaged ceiling tiles and walls; water damaged wood floor;

Conference Room – Water damaged ceiling tiles and walls; water damaged wood floor;

Office 7 – Water damaged ceiling tiles and walls;

Kitchen – Water damaged ceiling tiles and walls;

Office (continuation)

Studio – Water damaged ceiling tiles and walls;

Conference Room 2 – Water damaged ceiling tiles and walls;

Office 3– Water damaged ceiling tiles and walls.

Warehouse

There is water damaged wall and roof insulation throughout the warehouse.

The interior water damage requires restoration. Water damage restoration should follow the requirements of the latest version of the American National Standard Institute (ANSI) as expressed on their publication **ANSI (IICRC) S-500, Standard and Reference Guide for Professional Water Damage Restoration.**

Additional information may become available which would require modification of this Scope of Repairs.

Attached to this report please find the following:

Attachment A – Photographs

Attachment B – Weather Data

Attachment C – Photographs from National Public Adjusting

ATTACHMENT A

Photographs

It is not the intent of this report to document all damage or deficiencies in and around this building, but to show typical conditions that affect the opinions expressed in this report. The lists and photographs in or attached to this report are intended to illustrate representative damage and should not be considered as being all inclusive of the damage or deficiencies observed at this building.

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 1: Front - Overall view with left side



Photograph 2: Front - Address street number



Photograph 3: Left Side - Overall view at Office



Photograph 4: Office Roof - Left side edge; screws covered with sealant



Photograph 5: Office Roof - Left slope; standing seam metal panel



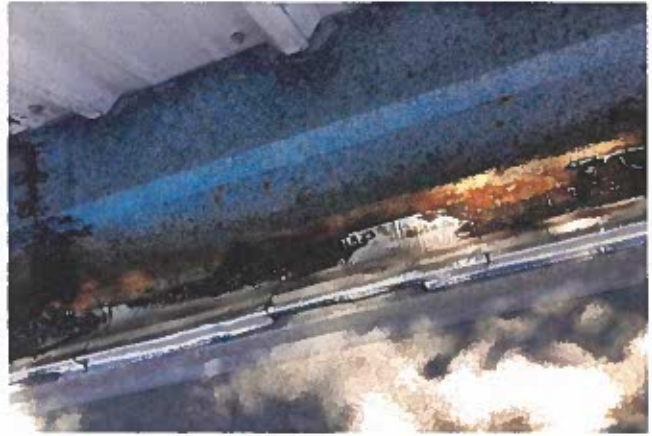
Photograph 6: Office Roof - Left slope; dirt and debris at gutter end

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5631 Brystone Drive, Houston, Texas



Photograph 7: Office Roof - Right corner at rear building



Photograph 8: Office Roof - Taped seam near rear building wall



Photograph 9: Office Roof - Middle and right slope at overlap seam; R-panel type metal Office roofing panels



Photograph 10: Office Roof - Right slope; overall view



Photograph 11: Office Roof - Crimps on Office Roof; foot traffic



Photograph 12: Office Roof - Crimps on Office Roof; foot traffic

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 13: Office Roof - Crimps on Office roof; foot traffic



Photograph 14: Office Roof - Crimps on Office roof; foot traffic



Photograph 15: Office Roof - Crimps on Office roof; foot traffic



Photograph 16: Office Roof - Sealant applied to Office roof screws



Photograph 17: Office Roof - Loose screw
Sealant applied to vent roof jack



Photograph 18: Office Roof - Deformed and
sealant applied to flashing at rear building wall

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 19: Office Roof - Sealant applied to flashing at rear building wall



Photograph 20: Office Roof - Wind separated Office roof joint



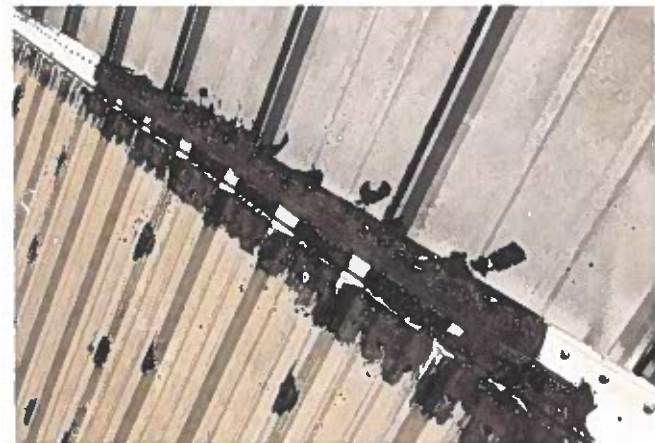
Photograph 21: Office Roof - Wind separated Office roof joint



Photograph 22: Office Roof - Sealant applied to roof vent jack



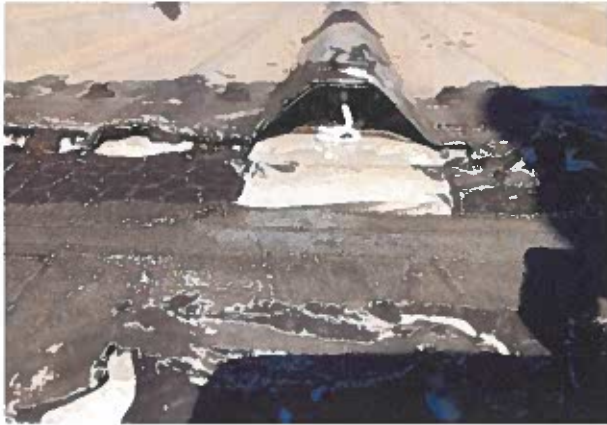
Photograph 23: Office Roof - Sealant applied to flashing at rear building wall



Photograph 24: Office Roof - Sealant applied to transition of panel types on left slope

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 25: Office Roof - Blown-off seam gasket



Photograph 26: Office Roof - Wind displaced closure strip



Photograph 27: Office Roof - Remaining closure strips



Photograph 28: Warehouse Roof - Overall view of trapezoidal seam metal roof (R-panel); screws have been covered with sealant



Photograph 29: Warehouse Roof - Overall view of trapezoidal seam metal roof (R-panel); screws have been covered with sealant



Photograph 30: Warehouse Roof - Sealant applied to screws

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5631 Brystone Drive, Houston, Texas



Photograph 31: Warehouse Roof - Sealant on panel standing seam



Photograph 32: Warehouse Roof - Sealant applied to screws



Photograph 33: Warehouse Roof - Sealant applied at edge trim and section strap



Photograph 34: Warehouse Roof - Edge of roof at front



Photograph 35: Warehouse Roof - Overall view along left side



Photograph 36: Warehouse Roof - Roof at rear corner; temporary gutter bracket

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



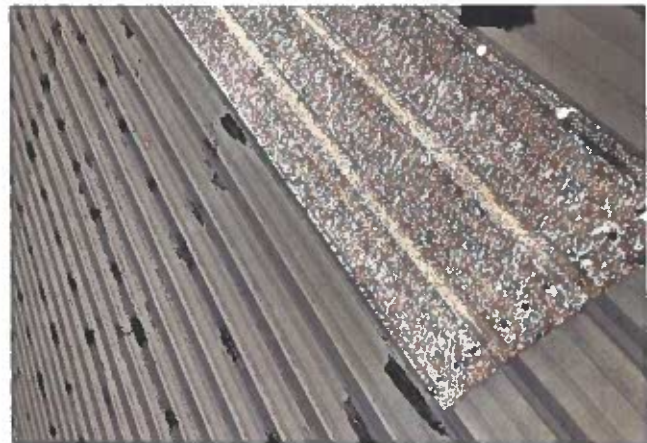
Photograph 37: Warehouse Roof - Roof crimps



Photograph 38: Warehouse Roof - Mechanical dent on roof panel



Photograph 39: Warehouse Roof - Wind lifted side joint



Photograph 40: Warehouse Roof - Translucent panel



Photograph 41: Warehouse Roof - Hail dent on panel



Photograph 42: Warehouse Roof - Hail dent on panel

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 43: Warehouse Roof - Hail dent on panel



Photograph 44: Warehouse Roof - Mechanical dent and hail dent



Photograph 45: Warehouse Roof - Hail dent on panel



Photograph 46: Warehouse Roof - Hail dent on panel



Photograph 47: Warehouse Roof - Hail dent on panel



Photograph 48: Warehouse Roof - Hail dent on panel

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 49: Warehouse Roof - Missing screws at rear right corner



Photograph 50: Warehouse Roof - Screw with dented metal



Photograph 51: Warehouse Roof - Taped joint at ridge vent, temporary repair



Photograph 52: Warehouse Roof - Taped joint at ridge vent



Photograph 53: Warehouse Roof - Hail dent on roof panel



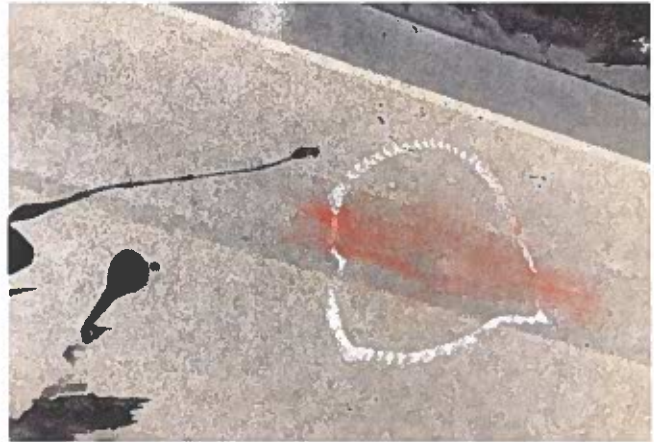
Photograph 54: Warehouse Roof - Hail dent on roof panel

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 55: Warehouse Roof - Hail dent on roof panel



Photograph 56: Warehouse Roof - Hail dent on roof panel



Photograph 57: Warehouse Roof - Wind separated overlap joint



Photograph 58: Warehouse Roof - Wind separated overlap joint



Photograph 59: Warehouse Roof - Wind separated overlap joint



Photograph 60: Warehouse Roof - Wind separated overlap joint

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 61: Roof - Screw with dented metal; separated longitudinal joint; dent on roof panel at screw



Photograph 62: Warehouse Roof - Wind separated overlap joint



Photograph 63: Warehouse Roof - Wind separated overlap joint



Photograph 64: Warehouse Roof - Wind separated overlap joint; dent on roof panel at screw



Photograph 65: Warehouse Roof - Wind separated overlap joint



Photograph 66: Warehouse Roof - Wind separated overlap joint; panel dent at screw

Project No.: 11992 - Cole & Aschroft, LP

5631 Brystone Drive, Houston, Texas



Photograph 67: Warehouse Roof - Wind separated overlap joint



Photograph 68: Warehouse Roof - Wind separated overlap joint



Photograph 69: Warehouse Roof - Wind separated overlap joint; panel dent at screw



Photograph 70: Warehouse Roof - Wind separated overlap joint



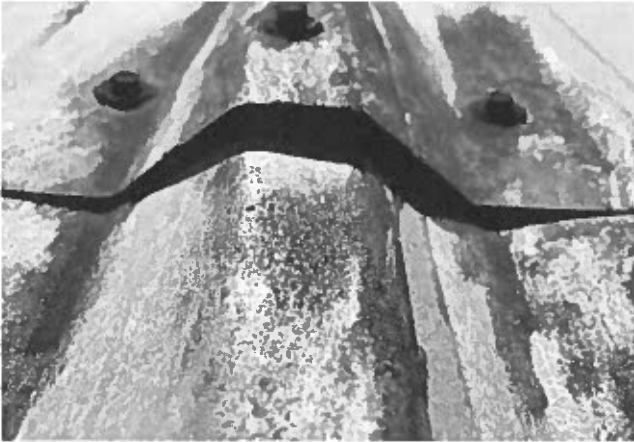
Photograph 71: Warehouse Roof - Wind separated overlap joint



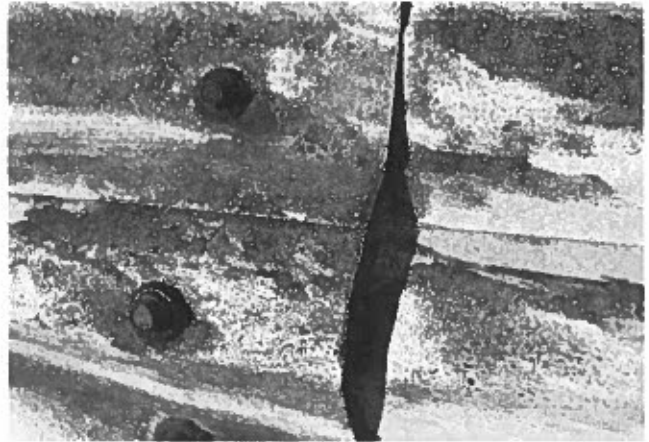
Photograph 72: Warehouse Roof - Wind separated overlap joint

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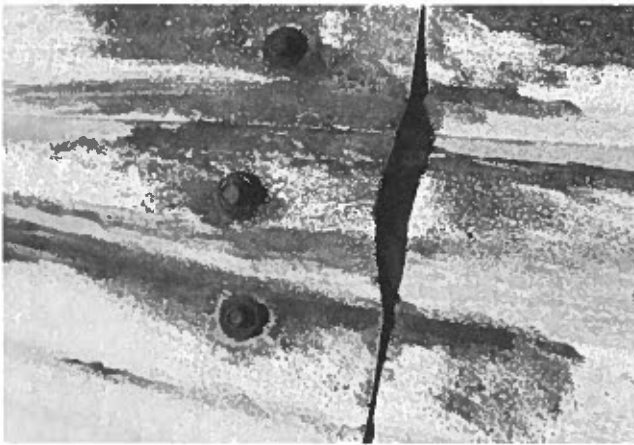
5631 Brystone Drive, Houston, Texas



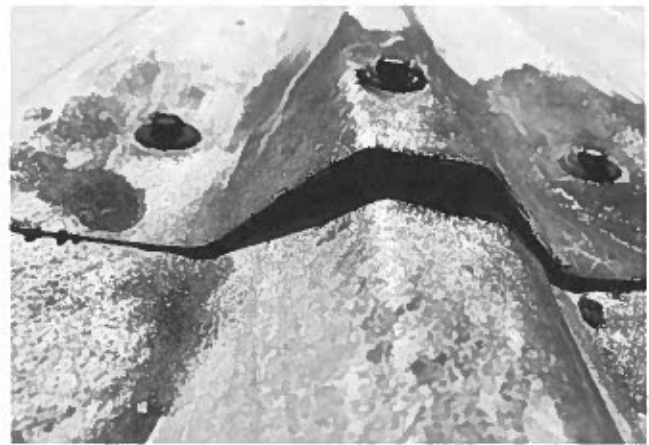
Photograph 73: Warehouse Roof - Wind separated overlap joint



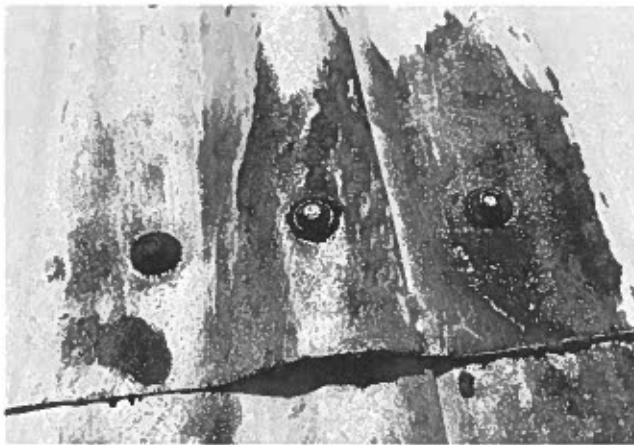
Photograph 74: Warehouse Roof - Wind separated overlap joint



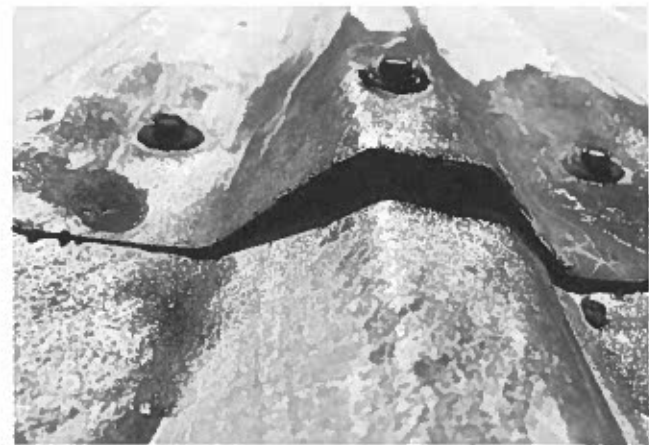
Photograph 75: Warehouse Roof - Wind separated overlap joint



Photograph 76: Warehouse Roof - Wind separated overlap joint



Photograph 77: Warehouse Roof - Wind separated overlap joint



Photograph 78: Warehouse Roof - Wind separated overlap joint

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5631 Brystone Drive, Houston, Texas



Photograph 79: Warehouse Roof - Wind separated overlap joint



Photograph 80: Warehouse Roof - Hail dent on roof panel



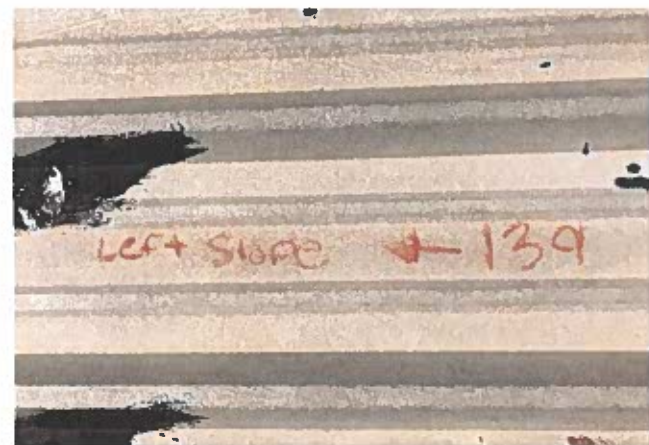
Photograph 81: Warehouse Roof - Hail dent on roof panel



Photograph 82: Warehouse Roof - Hail dent on roof panel



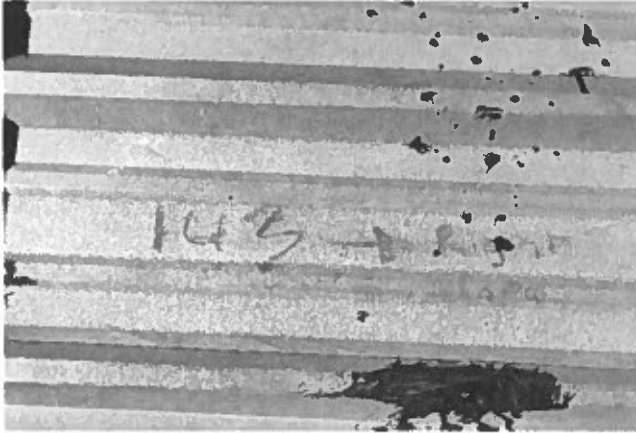
Photograph 83: Warehouse Roof - Hail dent on roof panel



Photograph 84: Warehouse Roof - Left slope; 139 hail dents

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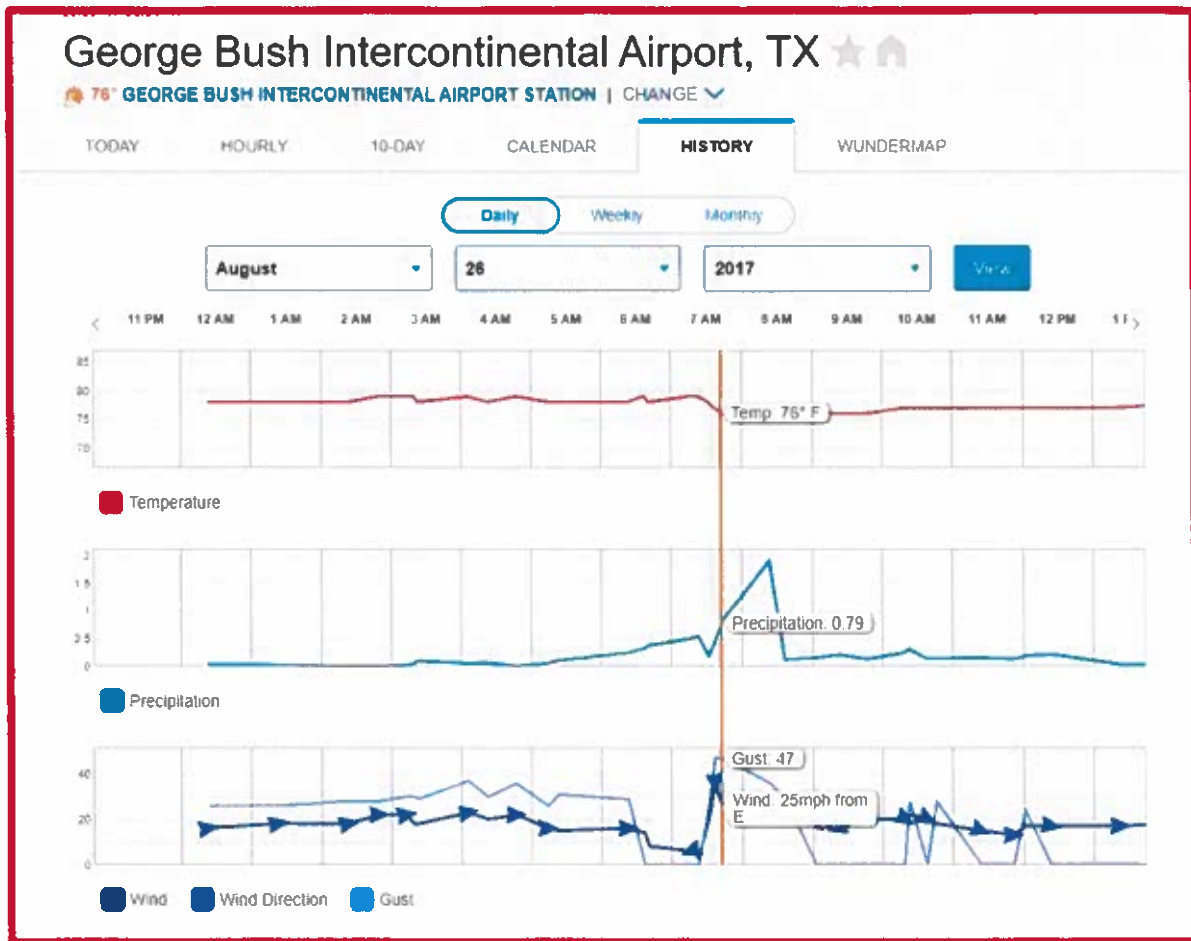
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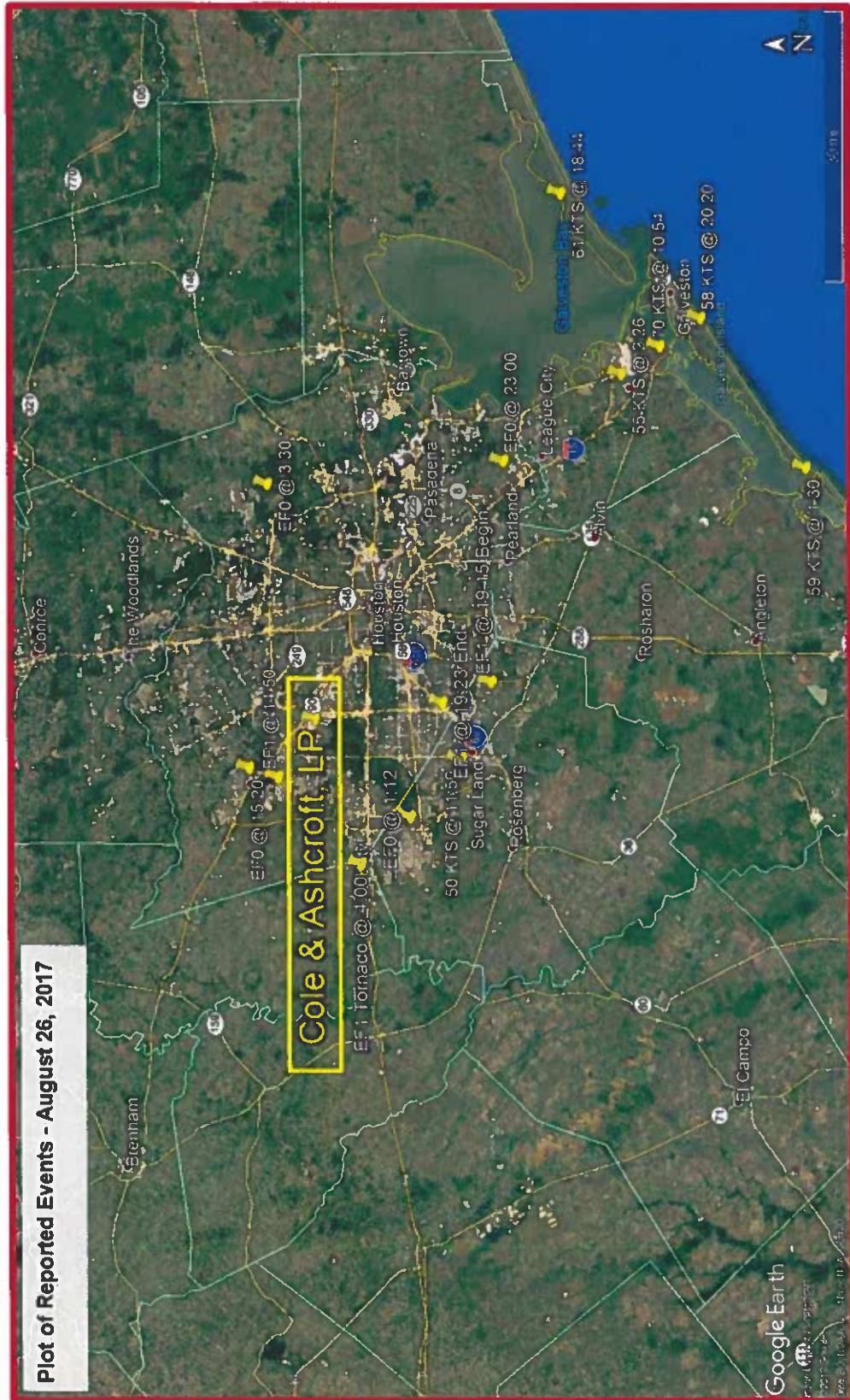


Photograph 85: Warehouse Roof - Right slope;
143 hail dents

ATTACHMENT B

Weather Data





**NEXRAD LEVEL III
BASE VELOCITY
AUGUST 26, 2017**

